

*Supplemental  
Notice of Allowability*

Application No.

09/826,670

Examiner

Jerome Grant II

Applicant(s)

HUANG ET AL

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1-28-2005.
2. ☒ The allowed claim(s) is/are 1-36.
3. ☒ The drawings filed on 05 April 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 6-30-05
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

JEROME GRANT II  
PRIMARY EXAMINER

**Examiner's Amendment**

Claim 1. (Currently Amended by the Examiner) A method for mixing inks to facilitate high fidelity color reproduction for printing, the method comprising the steps of:

computing a first color space using a forward printer model and a first colorant space, with the first color space having no black ink values from the first colorant space, thereby establishing a relationship between the first color space and the first colorant space;

computing a second colorant space using the forward printer model wherein each point in the second colorant space has one corresponding point in the first color space;

Computing a second color space using the forward printer model and CMYK ink values;

computing a third color space by comparing the second color space to the first color space to determine which color points in the first color space require black ink;

computing a third colorant space using the printer model and the third color space, wherein each point in the third colorant space has a corresponding point in the third color space;

computing a first color space by calibrating and correcting the third color space;

linking the fourth color space with the third colorant space using the forward printer model, wherein each point in the fourth color space has a corresponding point the in the third color space; and

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forming a color reproduction table using the fourth color space and the third colorant, for receiving a data input and providing a colorant output for use in mixing inks for high fidelity printing.

Claim 25. (Currently Amended by the Examiner) In an apparatus for printing on a print medium, the improvement comprising:

means for controlling the ink mixing to facilitate high fidelity color reproduction for printing, the control arrangement including;

means for computing a first color space using a forward printer model and a first colorant space, with the first color space having no black ink values from the first colorant space, thereby establishing a relationship between the first color space and the first colorant space;

means for computing a second colorant space using the forward printer model wherein each point in the second colorant space has one corresponding point in the first color space;

means for computing a second color space using the forward printer model and CMYK ink values;

means for computing a third color space by comparing the second color space to the first color space to determine which color points in the first color space require black ink; means for computing a third colorant space using the printer model and the third color space, wherein each point in the third colorant space has a corresponding point in the third color space;

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means for computing a fourth color space by calibrating and correcting the third color space;

means for linking the fourth color space with the third colorant space using the forward printer model, wherein each point in the fourth color space has a corresponding point in the third color space; and

means for forming a color reproduction table using the fourth color space and the third colorant space, for providing a colorant output responsive to a data input for use in mixing inks for high fidelity printing.

Claim 26. (Currently Amended by the Examiner) An improved printing apparatus according to claim 25 wherein the means for computing a first color space includes using a Neugebauer printer model to calculate CIELAB color values to form the first color space, with a CIELAB color value being calculated for each colorant point in the first colorant space based on at least one predetermined measurement.

Claim 27. (Currently Amended by the Examiner) An improved printing apparatus according to claim 26 wherein the means for calculating CIELAB color values includes sampling each ink at seventeen substantially evenly spaced points over the range from 0-100% ink.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Grant II whose telephone number is 571-272-7463. The examiner can normally be reached on Mon.-Thurs. from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A. Williams, can be reached on 571-272-7471. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

J. Grant II

JEROME GRANT II  
PRIMARY EXAMINER